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(54) **SYSTEM AND METHOD TO FACILITATE COMMUNICATIONS AND CONTENT SHARING AMONG USERS OVER A NETWORK**

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(51) **Int. Cl.**

G06F 15/16	(2006.01)
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H04L 29/06	(2006.01)
H04L 29/08	(2006.01)

(52) **U.S. Cl.**

CPC ***H04L 12/581*** (2013.01); ***H04L 29/06027*** (2013.01); ***H04L 51/04*** (2013.01); ***H04L 65/4007*** (2013.01); ***H04L 67/1063*** (2013.01); ***H04L 67/1085*** (2013.01); ***H04L 67/22*** (2013.01); *H04L 67/104* (2013.01); *H04L 67/306* (2013.01)

(58) **Field of Classification Search**

USPC 709/206

See application file for complete search history.

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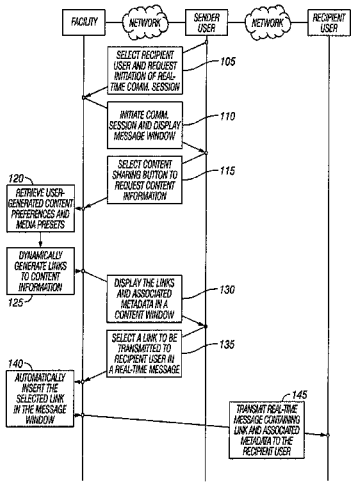
(57) **ABSTRACT**

A system and method to facilitate real-time communications and content sharing among users over a network are described. In one preferred embodiment, multiple links to content information are dynamically generated for a sender user. Responsive to selection of a link by the sender user, the link and associated metadata information are communicated to at least one recipient user engaged in the real-time communications session with the sender user.

24 Claims, 9 Drawing Sheets



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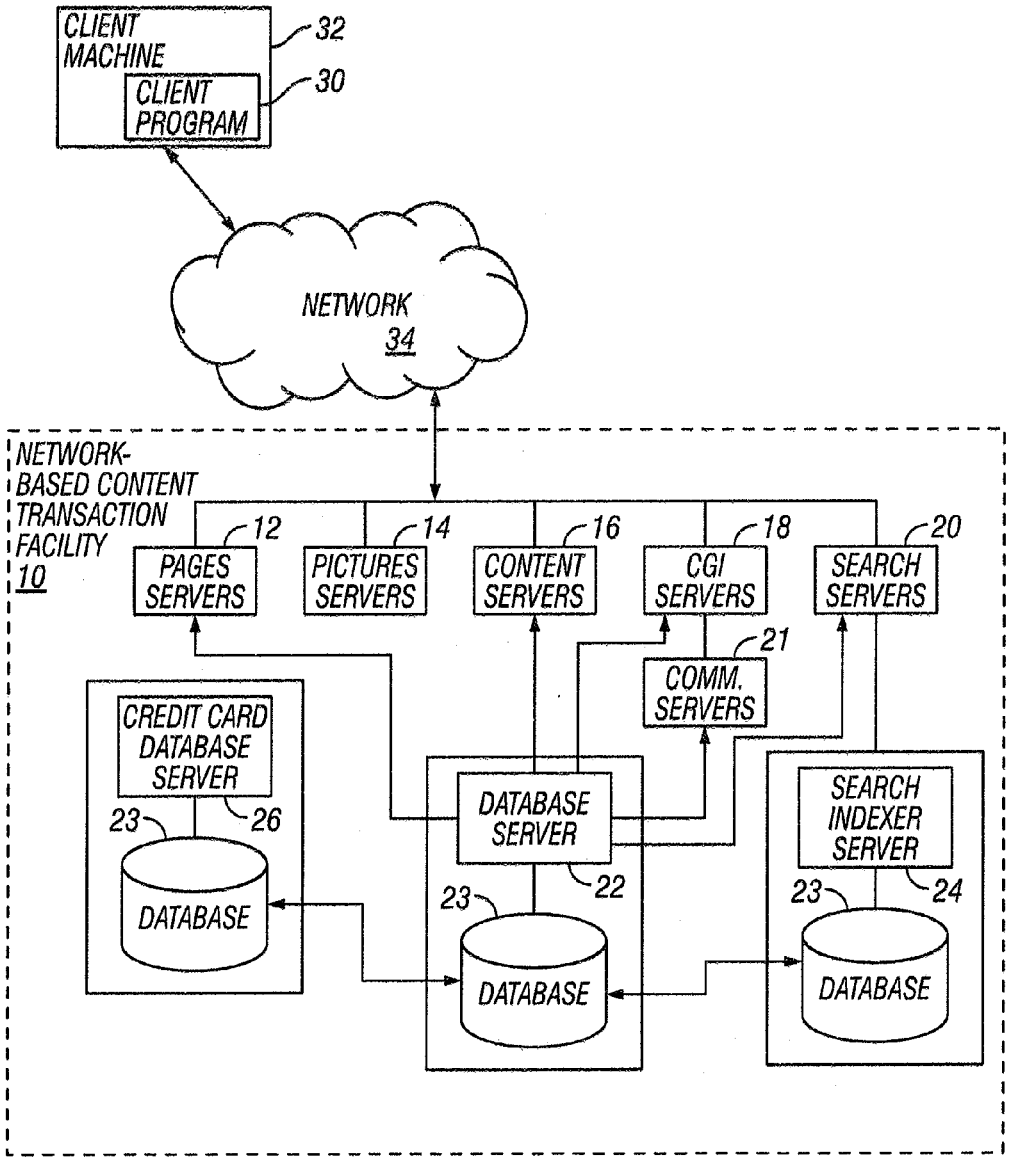
CLIENT MACHINE
32
CLIENT PROGRAM
30
NETWORK
34
NETWORK-BASED CONTENT TRANSACTION FACILITY
10
PAGES SERVERS
12
PICTURES SERVERS
14
CONTENT SERVERS
16
CGI SERVERS
18
SEARCH SERVERS
20
COMM. SERVERS
21
CREDIT CARD DATABASE SERVER
23
26
DATABASE
DATABASE SERVER
22
23
DATABASE
SEARCH INDEXER SERVER
23
24
DATABASE

FIG. 1

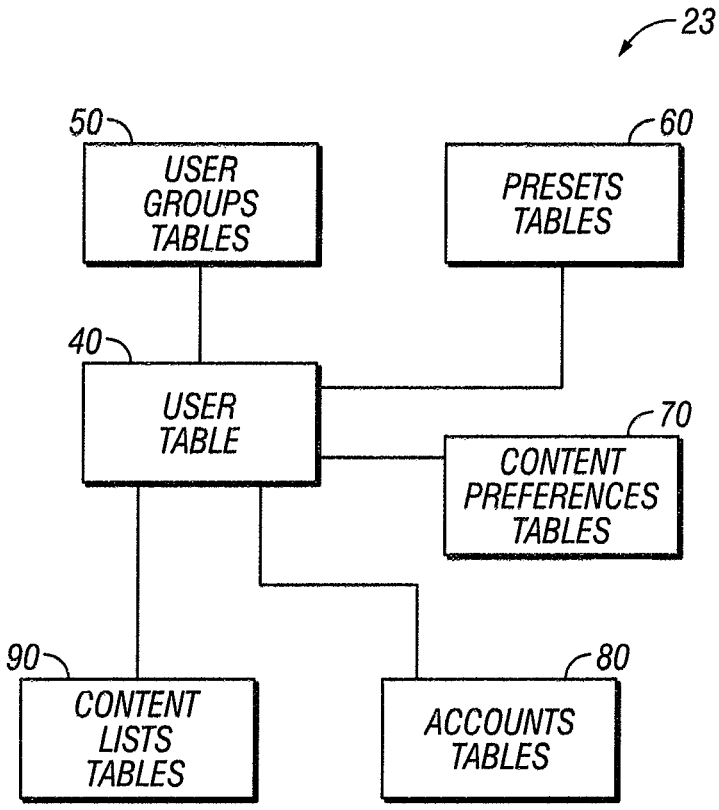
23
50
USER GROUPS TABLES
60
PRESETS TABLES
40
USER TABLE
70
CONTENT PREFERENCES TABLES
90
CONTENT LISTS TABLES
80
ACCOUNTS TABLES

FIG. 2

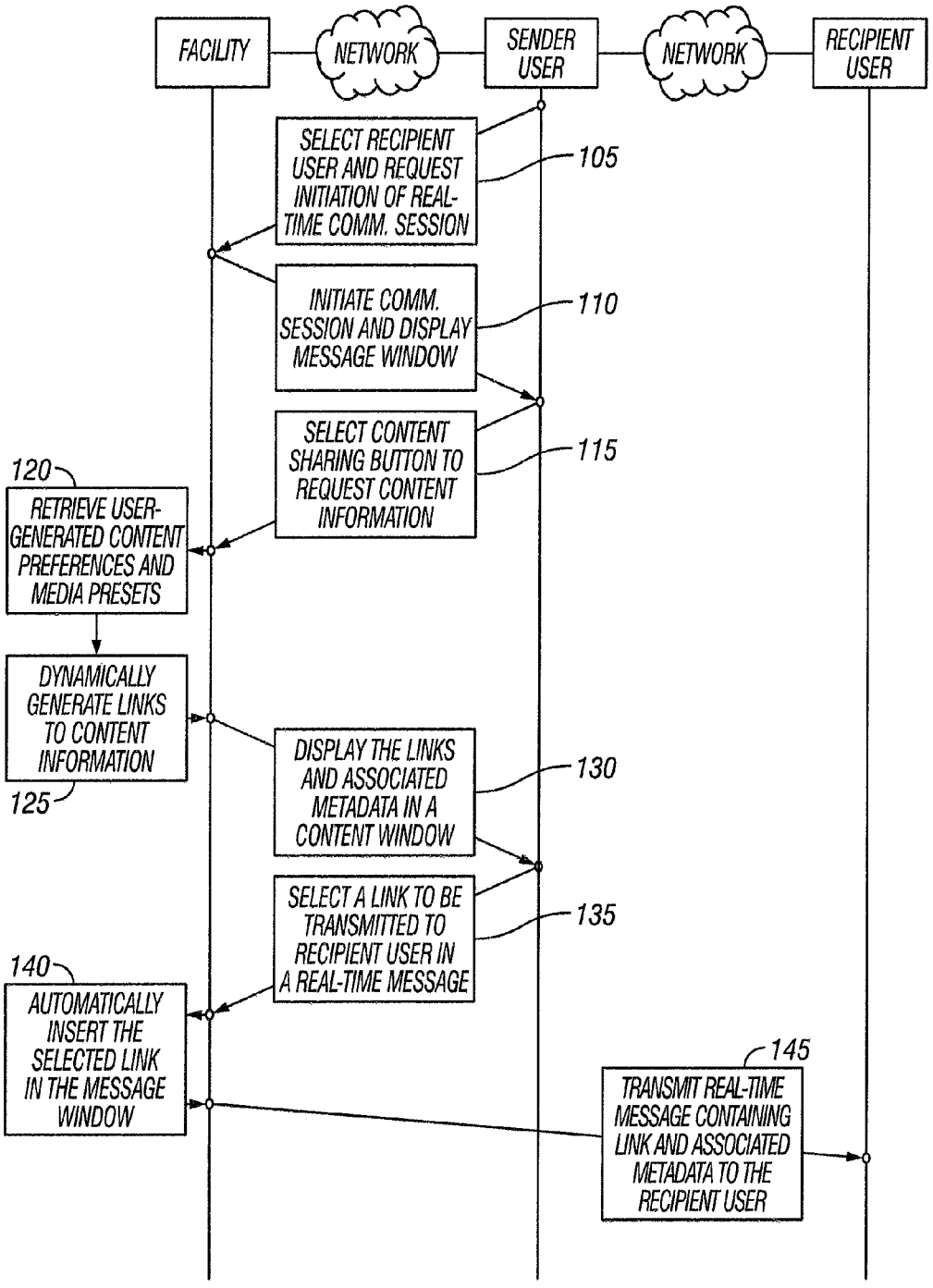
FACILITY
NETWORK
SENDER USER
NETWORK
RECIPIENT USER
SELECT RECIPIENT USER AND REQUEST INITIATION OF REAL-TIME COMM. SESSION
105
INITIATE COMM. SESSION AND DISPLAY MESSAGE WINDOW
110
SELECT CONTENT SHARING BUTTON TO REQUEST CONTENT INFORMATION
115
120
RETRIEVE USER-GENERATED CONTENT PREFERENCES AND MEDIA PRESETS
DYNAMICALLY GENERATE LINKS TO CONTENT INFORMATION
125
DISPLAY THE LINKS AND ASSOCIATED METADATA IN A CONTENT WINDOW
130
SELECT A LINK TO BE TRANSMITTED TO RECIPIENT USER IN A REAL-TIME MESSAGE
135
140
AUTOMATICALLY INSERT THE SELECTED LINK IN THE MESSAGE WINDOW
145
TRANSMIT REAL-TIME MESSAGE CONTAINING LINK AND ASSOCIATED METADATA TO THE RECIPIENT USER

FIG. 3

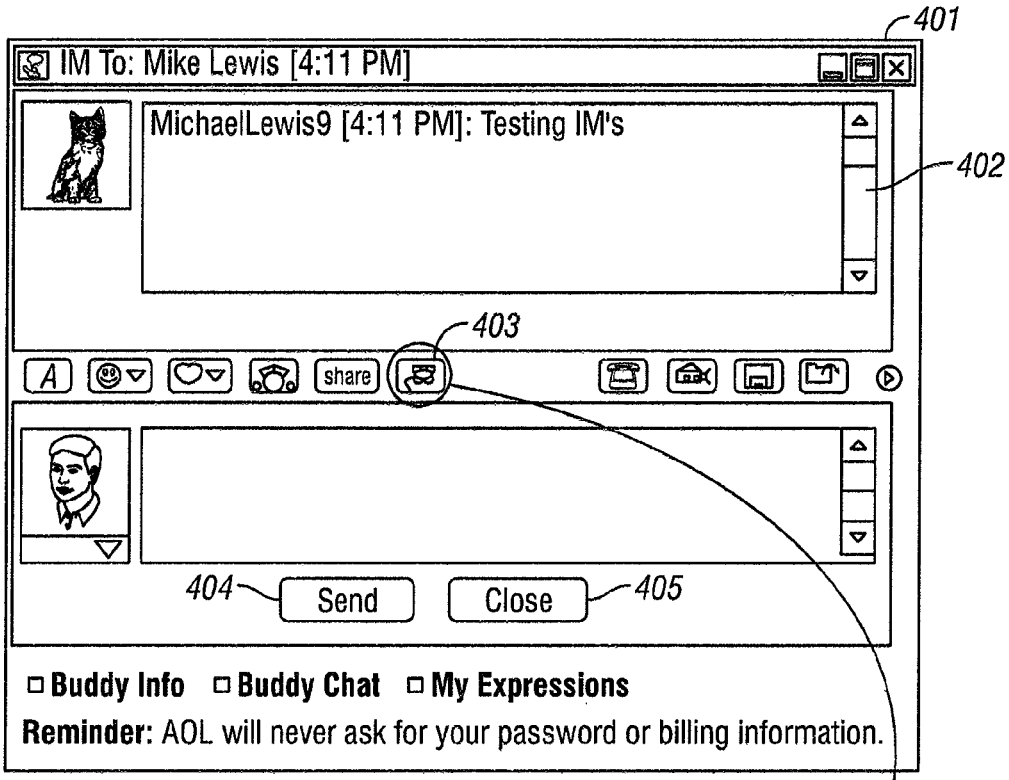
401
IM To: Mike Lewis [4:11 PM]
MichaelLewis9 [4:11 PM]: Testing IM's
402
403
share
404
Send
Close
405
Buddy Info
Buddy Chat
My Expressions
Reminder: AOL will never ask for your password or billing information.

FIG. 4A

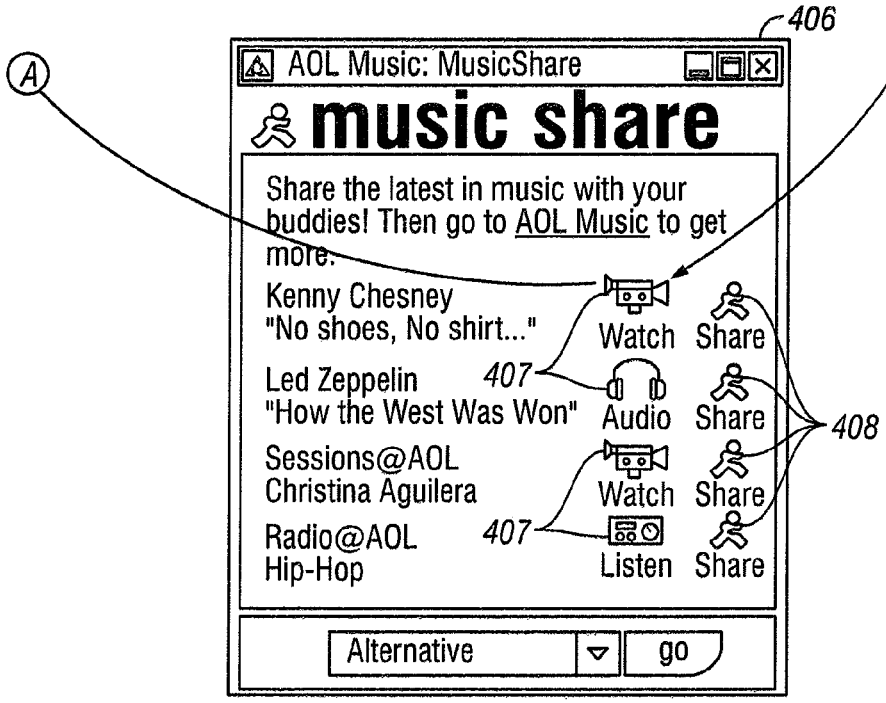
406
A
AOL Music: MusicShare
music share
Share the latest in music with your buddies! Then go to AOL Music to get more.
Kenny Chesney
"No shoes, No shirt..."
Watch
Share
Led Zeppelin
"How the West Was Won"
407
Audio
Share
408
Sessions@AOL
Christina Aguilera
Watch
Share
Radio@AOL
Hip-Hop
407
Listen
Share
Alternative
go

FIG. 4B

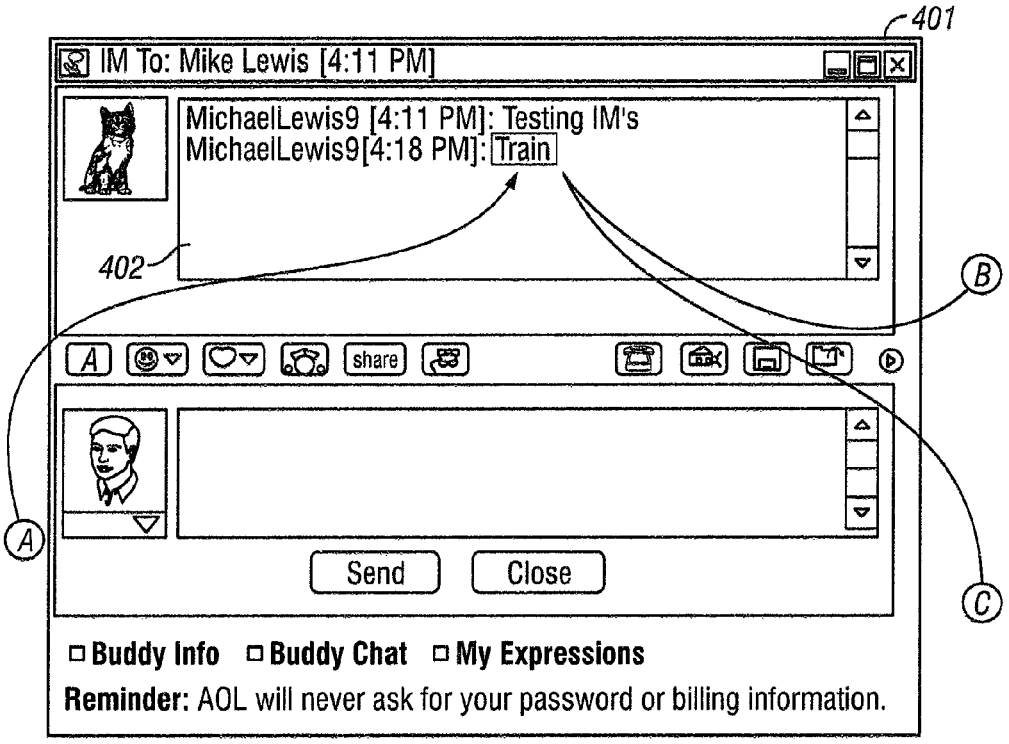
401
IM To: Mike Lewis [4:11 PM]
MichaelLewis9 [4:11 PM]: Testing IM's
MichaelLewis9[4:18 PM]: Train
402
A
share
Send
Close
B
C
Buddy Info
Buddy Chat
My Expressions
Reminder: AOL will never ask for your password or billing information.

FIG. 4C

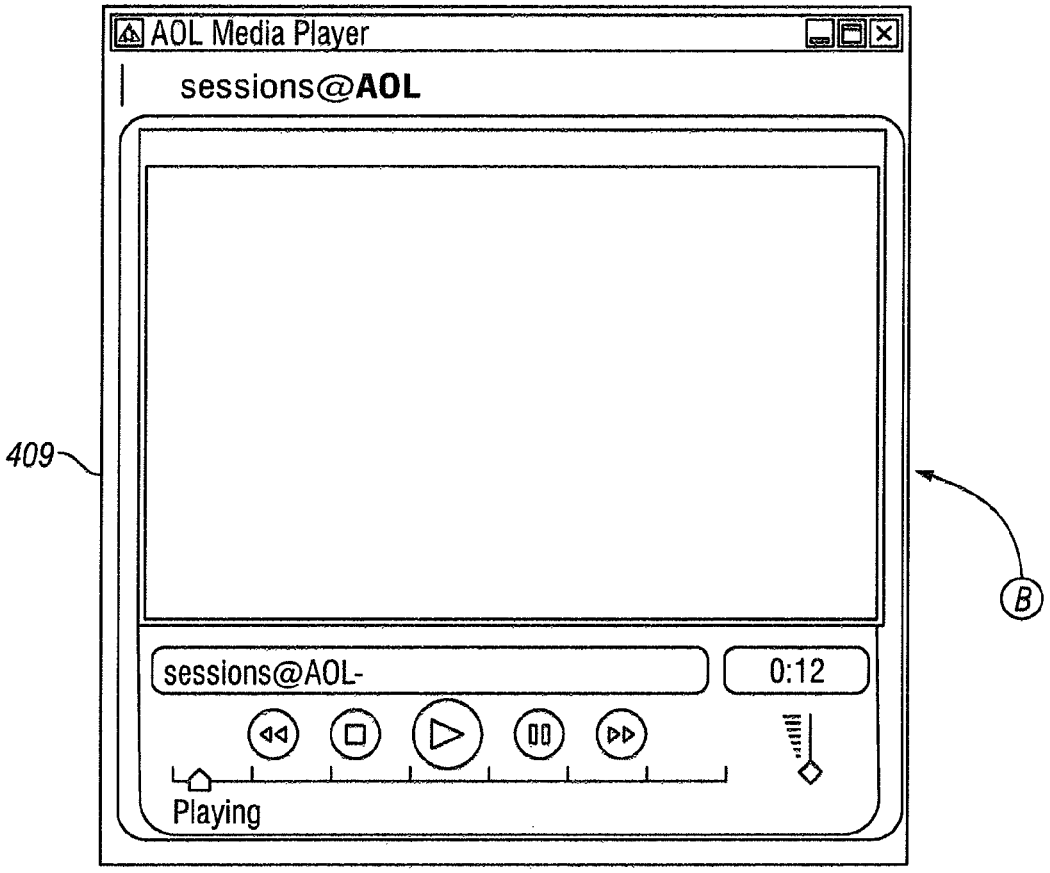
AOL Media Player
sessions@AOL
409
B
sessions@AOL-
0:12
Playing

FIG. 4D

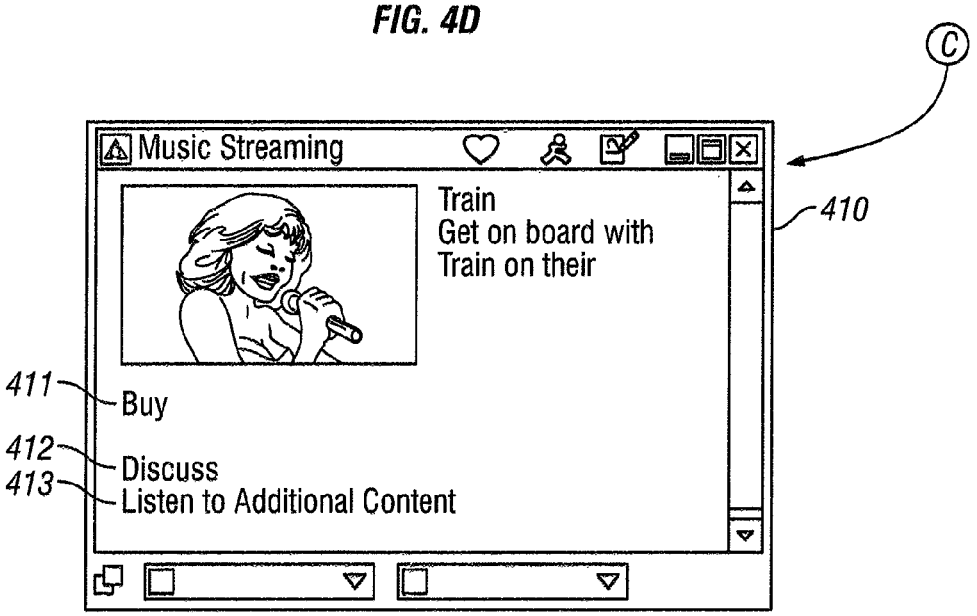
C
Music Streaming
Train
Get on board with
Train on their
410
411
Buy
412
Discuss
413
Listen to Additional Content

FIG. 4E

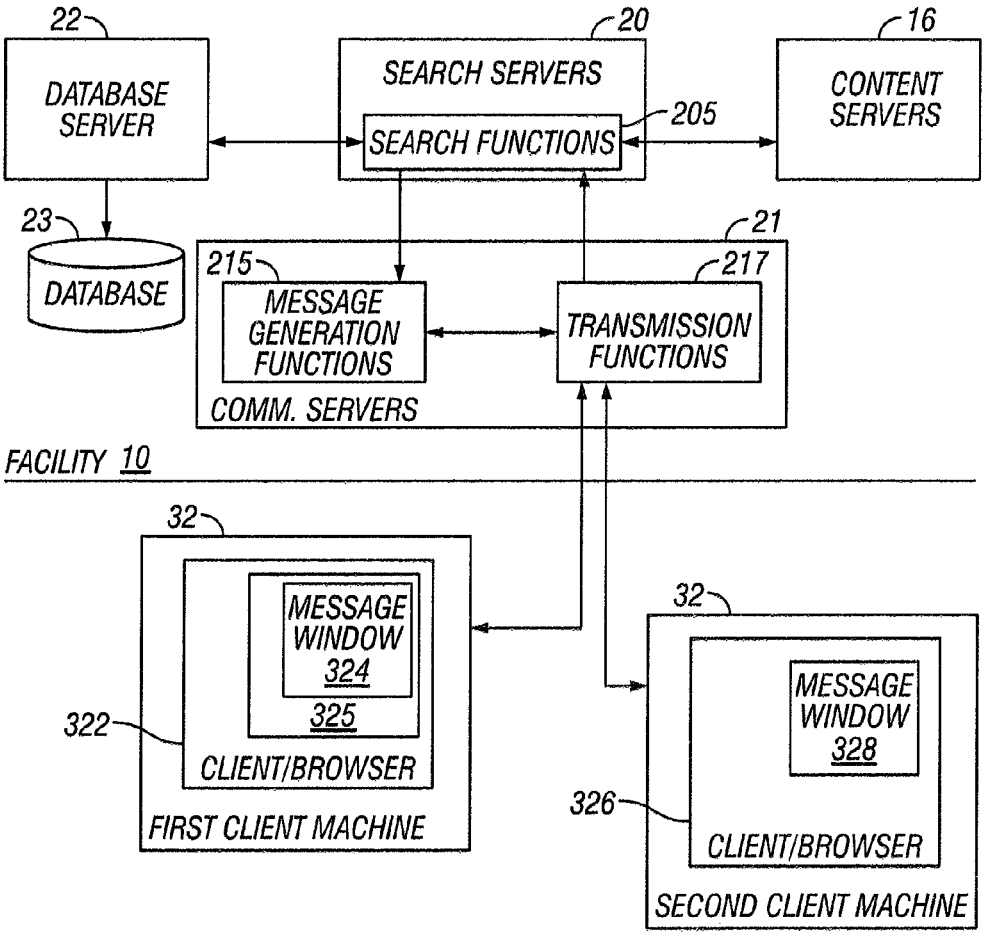
22
DATABASE SERVER
20
SEARCH SERVERS
SEARCH FUNCTIONS
205
16
CONTENT SERVERS
23
DATABASE
21
215
MESSAGE GENERATION FUNCTIONS
217
TRANSMISSION FUNCTIONS
COMM. SERVERS
FACILITY 10
32
MESSAGE WINDOW 324
325
322
CLIENT/BROWSER
FIRST CLIENT MACHINE
32
MESSAGE WINDOW 328
326
CLIENT/BROWSER
SECOND CLIENT MACHINE

FIG. 5

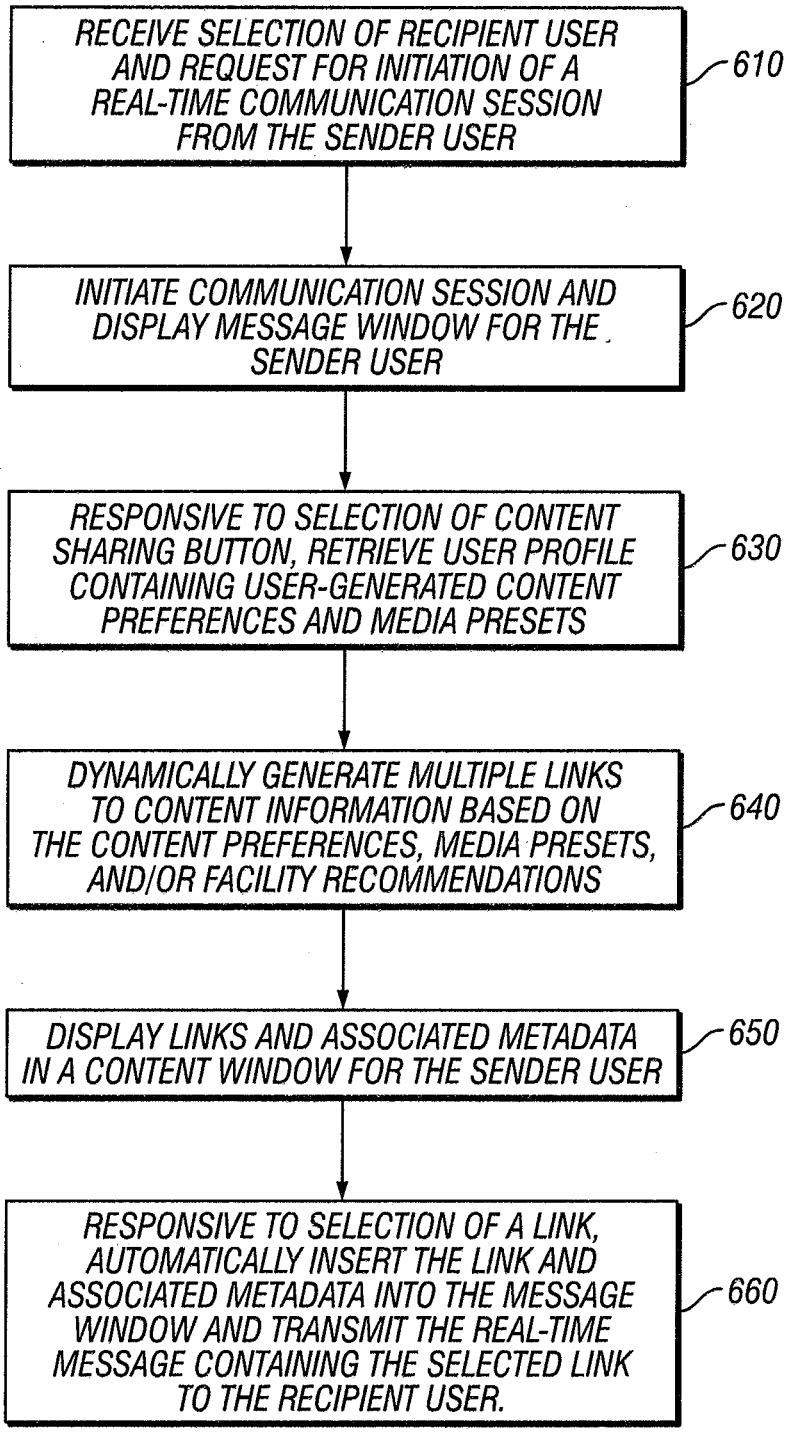
RECEIVE SELECTION OF RECIPIENT USER AND REQUEST FOR INITIATION OF A REAL-TIME COMMUNICATION SESSION FROM THE SENDER USER
610
INITIATE COMMUNICATION SESSION AND DISPLAY MESSAGE WINDOW FOR THE SENDER USER
620
RESPONSIVE TO SELECTION OF CONTENT SHARING BUTTON, RETRIEVE USER PROFILE CONTAINING USER-GENERATED CONTENT PREFERENCES AND MEDIA PRESETS
630
DYNAMICALLY GENERATE MULTIPLE LINKS TO CONTENT INFORMATION BASED ON THE CONTENT PREFERENCES, MEDIA PRESETS, AND/OR FACILITY RECOMMENDATIONS
640
DISPLAY LINKS AND ASSOCIATED METADATA IN A CONTENT WINDOW FOR THE SENDER USER
650
RESPONSIVE TO SELECTION OF A LINK, AUTOMATICALLY INSERT THE LINK AND ASSOCIATED METADATA INTO THE MESSAGE WINDOW AND TRANSMIT THE REAL-TIME MESSAGE CONTAINING THE SELECTED LINK TO THE RECIPIENT USER.
660

FIG. 6

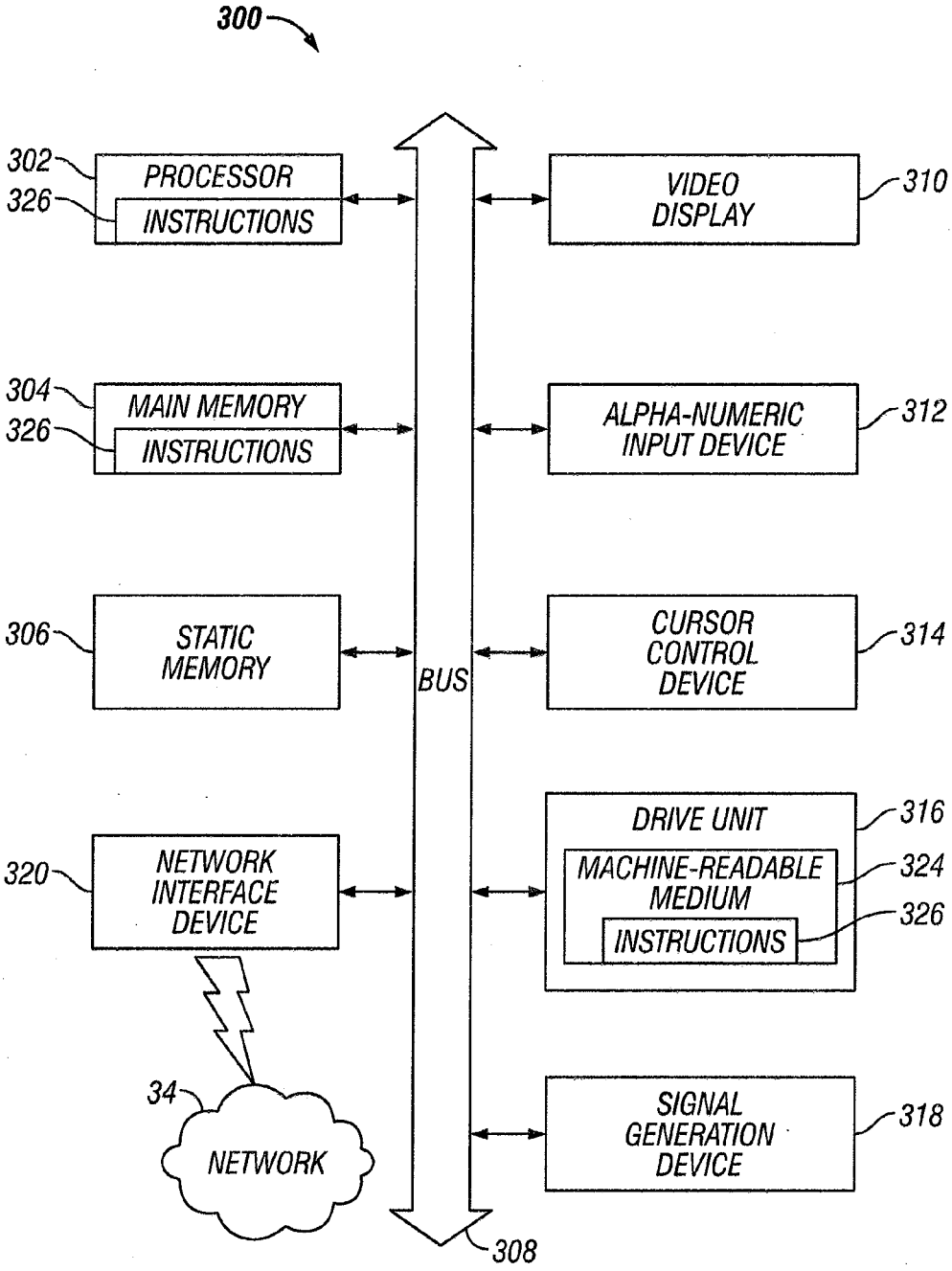
300
302
PROCESSOR
326
INSTRUCTIONS
304
MAIN MEMORY
326
INSTRUCTIONS
306
STATIC MEMORY
320
NETWORK INTERFACE DEVICE
34
NETWORK
BUS
308
VIDEO DISPLAY
310
ALPHA-NUMERIC INPUT DEVICE
312
CURSOR CONTROL DEVICE
314
DRIVE UNIT
316
MACHINE-READABLE MEDIUM
324
INSTRUCTIONS
326
SIGNAL GENERATION DEVICE
318

FIG. 7

SYSTEM AND METHOD TO FACILITATE COMMUNICATIONS AND CONTENT SHARING AMONG USERS OVER A NETWORK

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is a continuation of U.S. application Ser. No. 12/987,788, filed Jan. 10, 2011, which is a continuation of U.S. application Ser. No. 10/536,216, filed Sep. 29, 2005, which is now issued as U.S. Pat. No. 7,870,197, which is a 371 national stage application of international application number PCT/US03/37885, filed Nov. 24, 2003. Each of the aforementioned patent(s) and application(s) are hereby incorporated by reference in their entirety.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates generally to the field of network-based communications and, more particularly, to a system and method to facilitate real-time communications and content sharing among users over a network, such as the Internet.

2. Description of the Related Art

The explosive growth of the Internet as a publication and interactive communication platform has created an electronic environment that is changing the way business is transacted and the way entertainment is perceived. As the Internet becomes increasingly accessible around the world, communications among users increase exponentially.

Several attempts have been made to facilitate such network-based communications, namely to provide software packages residing on a computer and configured, for example, to acquire digital content from content providers over a network, such as the Internet, and to facilitate sharing of the digital content among the users. However, the increased popularity of some of these software packages may give rise to legal problems in the areas of ownership and protection of the acquired digital content. For example, many of the current content sharing software applications rely on anonymous usage. Thus, there is an increased risk of unauthorized use of the content in violation of content protection laws.

SUMMARY OF THE INVENTION

A system and method to facilitate real-time communications and content sharing among users over a network are described. In one preferred embodiment, multiple links to content information are dynamically generated for a sender user. Responsive to selection of a link by the sender user, the link and associated metadata information are communicated to at least one recipient user engaged in the real-time communication session with the sender user.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a block diagram illustrating an exemplary network-based content transaction and communications facility, which facilitates content sharing among users according to the invention;

FIG. **2** is a block diagram illustrating an exemplary database, maintained by and accessed via a database server, which at least partially implements and supports the network-based content transaction and communications facility according to the invention;

FIG. **3** is an interaction diagram illustrating a sequence of interactions to facilitate real-time communications and content sharing among users over the network according to an exemplary embodiment of the invention;

FIGS. **4**A-E illustrate exemplary interfaces to facilitate real-time communications and content sharing among users over the network;

FIG. **5** is a block diagram illustrating an exemplary environment in which the interaction sequence illustrated in FIG. **3** may be employed according to an exemplary embodiment of the invention;

FIG. **6** is a flow chart illustrating a method to facilitate real-time communications and content sharing among users over a network according to an exemplary embodiment of the invention; and

FIG. **7** is a diagrammatic representation of a machine in the exemplary form of a computer system within which a set of instructions may be executed.

DETAILED DESCRIPTION OF THE INVENTION

FIG. **1** is a block diagram illustrating an exemplary network-based content transaction and communications facility **10**, which facilitates content sharing among users. While an exemplary embodiment of the invention is described within the context of a content transaction and communications facility, it will be appreciated by those skilled in the art that the invention will find application in many different types of computer-based, and network-based, commerce facilities.

The facility **10** includes one or more of a number of types of front-end servers, namely page servers **12**, which deliver web pages to multiple users, e.g. markup language documents, picture servers **14**, which dynamically deliver images to be displayed within the web pages, content servers **16**, which dynamically deliver content information to the users, such as, for example, audio and video data, processing servers in the exemplary form of Common Gateway Interface (CGI) or Internet Server Application Program Interface (ISAPI) servers **18**, which provide an intelligent interface to the back-end of the facility **10**, and processing search servers **20**, which handle search requests to the facility **10**. In addition, the facility **10** includes real-time communication servers **21** that provide, inter alia, automated real-time communications, such as, for example, instant messaging (IM) functionality, to/from users of the facility **10**, and electronic mail (email) servers (not shown), which provide automated email communications to/from users.

The facility **10** further includes one or more back-end servers, for example, a database server **22**, a search indexer server **24**, and a credit card database server **26**, each of which maintains and facilitates access to a respective database **23**. The network-based content transaction facility **10** may be accessed by a client program **30**, such as a browser, e.g. the Internet Explorer browser distributed by Microsoft Corporation of Redmond, Wash., that executes on a client machine **32** and accesses the facility **10** via a network **34**, such as, for example, the Internet. Other examples of networks that a client may utilize to access the facility **10** includes a wide area network (WAN), a local area network (LAN), a wireless network, e.g. a cellular network, the Plain Old Telephone Service (POTS) network, or other known networks.

FIG. **2** is a block diagram illustrating an exemplary database **23**, maintained by and accessed via a database server, which at least partially implements and supports the network-based content transaction and communications facility **10**. The database **23** may, in one embodiment, be implemented as a relational database, and includes a number of tables having

entries, or records, that are linked by indices and keys. In an alternative embodiment, the database **23** may be implemented as a collection of objects in an object-oriented database.

Central to the database **23** shown in FIG. **2** is a user table **40**, which contains records for each entity or user of the facility **10**. The database **23** also includes an accounts table **80**, which may be linked to the user table **40** and may be populated with account information related to each user of the network-based facility **10**.

The database **23** may include a number of other tables, which may also be shown to be linked to the user table **40**, for example, tables specifically provided to enable an exemplary embodiment of the present invention. One or more content preferences tables **70** are configured to store user-generated content preferences and/or selections, part of a user profile constructed and stored for each user. One or more presets tables **60** are configured to store another portion of each user profile, which includes user-generated media presets, such as, for example, radio station presets accessed by each specific user and radio station presets reported as preferred by each user. One or more user groups tables **50** are configured to store user-generated content group lists, each list grouping users interested in similar content, for example users interested in particular audio files and/or video files. Finally, one or more content lists tables **90** are configured to store user-generated content lists, each list grouping similar content items preferred by the particular user, such as, for example, preferred audio files lists and video files lists. Prior to any communication between client **32** and the network-based facility **10**, each media preset and/or user preference is generated and stored in the respective tables **60**, **70**. In one embodiment, each user has continuous access to the user profile and may modify at anytime the content preferences, the media presets, the content group lists, and the content lists.

FIG. **3** is an interaction diagram illustrating a sequence **100** of interactions to facilitate real-time communications and content sharing among users, in the exemplary form of a sender user **101** and a recipient user **102**. FIGS. **4**A-**4**E illustrate exemplary interfaces to facilitate real-time communications and content sharing among users over the network. While the sequence **100** describes a client-server environment, whereby communications between the sender and recipient users **101** and **102** are facilitated by, or performed through, the network-based facility **10**, it will also be appreciated that the teachings of the invention may be applied to a peer-to-peer environment, whereby the users **101** and **102** communicate directly and not through the facility **10**, or may be applied to a client-server environment functioning over another real-time communications network.

As illustrated in FIG. **3**, in one embodiment, the sequence **100** commences at block **105** with selection by the sender user **101** of a recipient user **102** and a request to initiate a real-time communication session with the recipient user **102**, such as, for example, an instant messaging (IM) communication session. The recipient user **102** may be selected, in one embodiment, with a conventional mouse click command from a user list, such as, for example, a drop-down list or a menu list, the list containing multiple users and user groups available to participate in the real-time communication session with the sender user **101**, for example online users capable of exchanging IM messages. The facility **10** uses the search servers **20** to locate and to retrieve the users and the user groups from the respective user table **40** and user groups tables **50**, and further generates and displays the user list specifically for the sender user **101**. Alternatively, the user list may also include content lists stored in the content lists tables **90** and generated by each one of the users available to communicate in real-time with the sender user **101**, if those users have made their content lists available for sharing. Subsequently, the sender user **101** may select a desired content list and request content information from the respective user associated with the selected content list.

In an alternate embodiment, the sender user **101** receives content, such as audio/video data, from the facility **10** in a content player, such as, for example, the Windows Media Player available from Microsoft Corporation of Redmond, Wash. Responsive to a conventional right-click mouse command, the user list described above may be displayed in a window for the sender user **101** to facilitate real-time communication of the content to the recipient user **102**. Alternatively, using a genre or artist associated with the received content, the facility **10** filters the user list of potential recipients to show only the users or user groups who have demonstrated a preference for that genre, potentially by having made a purchase, or by a download or stream operation of similar content belonging to the same genre or artist. The sender user **101** further selects the recipient user **102** from the filtered user list. In yet another alternate embodiment, the sender user **101** may select a recipient user group from the user list and may request initiation of a real-time communication session with each user of the recipient user group that is available for real-time communications with the sender user **101**.

At block **110**, the facility **10** initiates the real-time communication session between the sender user **101** and the recipient user **102** and displays a message window for the sender user **101** in a user interface area. Referring to FIG. **4**A, in one embodiment, the user interface area **401** presented to the sender user **101** further includes the message window **402**, such as, for example, an IM message window, and a number of command buttons, including a content sharing button **403**, a Send button **404** to send the message to the recipient user **102**, and a Close button **405** to close the user interface area **401**.

As illustrated in FIG. **3**, at block **115**, the sender user **101** selects the content sharing button **403** in the user interface area **401** to request content information from the facility **10**. Referring to FIG. **4**A, in one embodiment, the user interface area **401** facilitates selection of the content sharing button **403** with a conventional mouse click command and facilitates communication of the request to the facility **10**.

As illustrated in FIG. **3**, at block **120**, the facility **10** uses the search servers **20** to conduct a search of the presets tables **60** and the content preferences tables **70** to locate and retrieve the user profile of the sender user **101**, specifically the user-generated content preferences and media presets, if any. In an alternate embodiment, the search further extends to local directories of the client machine **32** of the sender user **101** for locally stored content, such as audio and/or video files designated to be shared with other users.

At block **125**, the facility **10** dynamically generates multiple links to content information based on the retrieved content preferences and media presets of the sender user **101**. For example, in one embodiment, if the sender user **101** has programmed media presets, such as radio station presets, but has not generated any content preferences, the facility **10** generates links for the media presets and, if necessary, generates additional links corresponding to its recommendations, based, for example, on the popularity of the content suggested. Alternatively, if the sender user **101** has generated both content preferences and media presets, the facility **10** generates an equal number of links for the content preferences and for the media presets. In yet another alternate embodiment, if the sender user **101** has generated content

preferences, but not media presets, the facility **10** generates links for the content preferences and, if necessary, generates additional links corresponding to its recommendations. Finally, if the sender user **101** has not programmed either the content preferences or the media presets, the facility **10** generates multiple links based on its content suggestions or based on a profile of the sender user **101** built by the facility **10** and based on frequency of access of the content data.

Similarly, in an alternate embodiment, the facility **10** may dynamically generate links to other content information designated by the sender user **101** as available for sharing, such as, for example, locally stored content, stored pictures, images, or other types of content information.

At block **130**, the generated links and associated metadata are displayed in a content window for the sender user **101**. Referring to FIG. **4**B, in one embodiment, a content window **406** is presented to the sender user **101**, the content window **406** displaying the facility-generated links to content information. The content window **406** further includes a pair of command icons corresponding to each displayed link, for example a Watch (for video data), Listen (for audio data), or Audio (for a radio station preset) icon **407** and a Share icon **408**, actionable through a conventional mouse click command. The content window **406** facilitates selection of an option to play the respective content in a corresponding media player via icons **407**, or, respectively, an option to share the content with the recipient user **102** via the Share icon **408**. In an alternate embodiment, if links to other types of content information are dynamically generated and displayed for the sender user **101**, appropriate command icons may be provided in the content window **406** to facilitate options to access the content with respective content viewers or players or to share it with other users.

As illustrated in FIG. **3**, at block **135**, the sender user **101** selects a link to be transmitted to the recipient user **102** through a mouse click on the Share icon **408** of the respective link. At block **140**, the selected link is automatically inserted in the message window **402**. Referring to FIG. **4**C, the facility **10** automatically inserts the selected link and its associated metadata into the message window **402**. In one embodiment, the associated metadata includes data pertaining to the content information associated with the link. For example, for a link to an audio file, such as a song track, or a video file, the associated metadata includes the artist's name, the title of the song, the title of the album, and one or more images. In an alternate embodiment, the insertion of a link to locally stored content of the sender user **101** would display the content file name and a request to the recipient user **102** to enter into a peer-to-peer download transmission of the selected locally stored content.

Finally, as illustrated in FIG. **3**, at block **145**, the facility **10** automatically transmits the real-time IM message containing the selected link and associated metadata to the recipient user **102**. In an alternate embodiment, if the sender user **101** already receives content, such as audio/video data, from the facility **10** in a content player, subsequent to the selection of a recipient user **102** from the user list and the display of the message window **402** in the user interface area **401**, the facility **10** automatically generates a content link to the content received by the sender user **101**, inserts the link in the message window **402**, and transmits the content link and its associated metadata to the selected recipient user **102**.

In one embodiment, the real-time IM message containing the selected link and associated metadata is communicated to the recipient user **102** through the communication servers **21** of the facility **10**. Upon receipt of the message, the recipient user **102** may accept the content associated with the transmitted link and subsequently download or stream the content through the content servers **16** of the facility **10**. Referring to FIG. **4**D, by clicking on the link with a conventional mouse click command, the recipient user **102** may open a media player window **409** and download or stream the associated content.

Alternatively, the recipient user **102** may sample the associated content information for a predetermined amount of time and decide whether to accept or decline the content. In another alternate embodiment, the recipient user **102** may review the metadata associated with the transmitted link and make a decision on whether to accept or decline the content. Referring to FIG. **4**E, the metadata is displayed in a real-time IM message window **410** for the recipient user **102** and allows the user **102** to see the information associated with the content communicated by the sender user **101**. In one embodiment, the message window **410** further includes multiple option links, such as, for example, a Buy option link **411** to facilitate purchase of the content from the facility **10**, a Discuss option link **412** to facilitate discussion among users related to the respective content, and a Listen to additional content option link **413** to facilitate retrieval of similar content from the content servers **16**. The message window **410** facilitates selection of an option link by the recipient user **102** with a conventional mouse click command and allows real-time communication with the facility **10**.

FIG. **5** is a block diagram illustrating an exemplary environment in which the interaction sequence illustrated in FIG. **3** may be employed. As illustrated in FIG. **5**, client machines **32** are shown to reside outside the context of a network-based transaction and communications facility, such as the exemplary facility **10** shown in FIG. **1**. Accordingly, this embodiment describes an application which allows a sender user **101** of a client machine **32**, such as the first client machine **32**, to communicate in real-time and to share content with a recipient user **102** of a further client machine **32**, such as the second client machine **32**, both of which reside outside the facility **10** or any other transaction facility.

Referring to FIG. **5**, the sender user **101** selects the recipient user **102** in a client/browser **322** that executes in the first client machine **32** and requests a real-time communication session with the recipient user **102**. The recipient user **102** may be selected, in one embodiment, with a conventional mouse click command from a user list containing multiple users and user groups available to communicate in real-time with the sender user **101**. The search servers **20** within the facility **10** search the user table **40** and the user groups tables **50** within the database **23** coupled to the database server **22** using search functions **205** to locate and retrieve the users and the user groups, and transmit the data to the communication servers **21**. The communication servers **21** use message generation functions **215** and transmission functions **217** to generate and to present the user list specifically for the sender user **101** in the client/browser **322**.

Alternatively, the user list may also include content lists stored in the content lists tables **90** and generated by each one of the users available to communicate in real-time with the sender user **101**, if those users have made their content lists available for sharing. Subsequently, the sender user **101** may select a desired content list and request content information from the respective user associated with the selected content list. In another alternate embodiment, the sender user **101** receives content, such as audio/video data, from the content servers **16** within the facility **10** in a content player, and, responsive to a conventional right-click mouse command, the user list may be displayed for the sender user **101** in a window or an interactive field within the content player. Alternatively,

using the genre or artist associated with the received content, the search servers **20** search the user database **23** and filter the user list of potential recipients to show only the users or user groups who have demonstrated a preference for that genre, potentially by having made a purchase, or by a download or stream operation of similar content belonging to the same genre or artist. The sender user **101** further selects the recipient user **102** from the filtered user list.

In one embodiment, the communication servers **21** initiate the real-time communication session between the sender user **101** and the recipient user **102** and display a message window **324**, such as, for example, an IM message window, in a user interface area **325** within the client/browser **322**. The user interface area **325** facilitates communication of a request for content information to the communication servers **21** and further to the search servers **20** of the facility **10**. The search servers **20** use the search functions **205** to conduct a search of the presets tables **60** and the content preferences tables **70** within the database **23** in order to locate and retrieve the user profile of the sender user **101**, specifically the user-generated content preferences and media presets, if any. Subsequently, using the message generation functions **215**, the communication servers **21** dynamically generate multiple links to content information based on the retrieved content preferences and media presets of the sender user **101**. Alternatively, the communication servers **21** may dynamically generate links to other content information designated by the sender user **101** as available for sharing, such as, for example, locally stored content, stored pictures, images, or other types of content information.

Furthermore, the communication servers **21** use the transmission functions **217** to display the generated links and associated metadata in a content window (not shown) in the client/browser **322**. The content window facilitates selection of an option to play the respective content in a corresponding media player or, respectively, an option to share the content with the recipient user **102**.

In one embodiment, the sender user **101** selects a link to be transmitted to the recipient user **102** in the message window **324** and the first client machine **32** communicates the link to the communication servers **21**. The communication servers **21** use the message generation functions **215** to insert automatically the selected link and its associated metadata into the message window **324** and use the transmission functions **217** to send the real-time IM message containing the selected link and associated metadata to the recipient user **102**. The message is shown to be communicated to the communication servers **21** and further to the recipient user **102**. Specifically, the message may be communicated, in one embodiment, as a real-time instant message or by utilizing any other transfer protocol or communication.

In an alternate embodiment, if the sender user **101** already receives content, such as audio/video data, from the content servers **16** of the facility **10**, subsequent to the selection of a recipient user **102** from the user list and the display of the message window **324** in the user interface area **325**, the communication servers **21** automatically generate a content link to the content received by the sender user **101**, insert the link in the message window **324**, and transmit the link and its associated metadata to the selected recipient user **102** using the transmission functions **217**.

In one embodiment, the real-time IM message containing the selected link and associated metadata is communicated to the recipient user **102** through the communication servers **21** of the facility **10** and is displayed in a message window **328** within the client/browser **326** of the second client machine **32**. Upon receipt of the message, the recipient user **102** may accept the content associated with the transmitted link and subsequently download or stream the content through the content servers **16** of the facility **10**.

Alternatively, the recipient user **102** may sample the associated content information for a predetermined amount of time via the content servers **16** and decide whether to accept or decline the content. In another alternate embodiment, the recipient user **102** may review the metadata associated with the link and decide whether to accept or decline the content. The metadata may be displayed in the message window **328** for the recipient user **102** and allows the user **102** to see the information associated with the content communicated by the sender user **101**.

FIG. **6** is a flow chart illustrating a method to facilitate real-time communications and content sharing among users over a network. As illustrated in FIG. **6**, at processing block **610**, selection of the recipient user **102** and a request for initiation of a real-time communication session is received from the sender user **101**.

At processing block **620**, the communication session is initiated between the sender user **101** and the recipient user **102** and a message window **402** is displayed in a user interface area **401** for the sender user **101**. At processing block **630**, in response to the selection of a content sharing button **403** within the user interface area **401**, a user profile of the sender user **101** containing user-generated content preferences and user-generated media presets is retrieved.

At processing block **640**, multiple links to content information are generated based on the retrieved content preferences and media presets, and on facility-generated recommendations. At processing block **650**, the links and associated metadata are displayed in a content window for the sender user **101**.

At processing block **660**, in response to selection of a link to be transmitted to the recipient user **102**, the selected link and its associated metadata are automatically inserted into the message window and the real-time message containing the selected link is transmitted to the recipient user **102**.

FIG. **7** shows a diagrammatic representation of a machine in the exemplary form of a computer system **300** within which a set of instructions, for causing the machine to perform any one of the methodologies discussed above, may be executed. In alternative embodiments, the machine may comprise a network router, a network switch, a network bridge, Personal Digital Assistant (PDA), a cellular telephone, a web appliance or any machine capable of executing a sequence of instructions that specify actions to be taken by that machine.

The computer system **300** includes a processor **302**, a main memory **304** and a static memory **306**, which communicate with each other via a bus **308**. The computer system **300** may further include a video display unit **310**, e.g. a liquid crystal display (LCD) or a cathode ray tube (CRT). The computer system **300** also includes an alphanumeric input device **312**, e.g, a keyboard, a cursor control device **314**, e.g. a mouse, a disk drive unit **316**, a signal generation device **18**, e.g. a speaker, and a network interface device **320**.

The disk drive unit **316** includes a machine-readable medium **324** on which is stored a set of instructions, i.e. software, **326** embodying any one, or all, of the methodologies described above. The software **326** is also shown to reside, completely or at least partially, within the main memory **304** and/or within the processor **302**. The software **326** may further be transmitted or received via the network interface device **320**.

It is to be understood that embodiments of this invention may be used as or to support software programs executed upon some form of processing core (such as the CPU of a

computer) or otherwise implemented or realized upon or within a machine or computer readable medium. A machine readable medium includes any mechanism for storing or transmitting information in a form readable by a machine, e.g. a computer. For example, a machine readable medium includes read-only memory (ROM); random access memory (RAM); magnetic disk storage media; optical storage media; flash memory devices; electrical, optical, acoustical or other form of propagated signals, e.g. carrier waves, infrared signals, digital signals, etc.; or any other type of media suitable for storing or transmitting information.

In the foregoing specification, the invention has been described with reference to specific exemplary embodiments thereof. It will, however, be evident that various modifications and changes may be made thereto without departing from the broader spirit and scope of the invention as set forth in the appended claims. The specification and drawings are, accordingly, to be regarded in an illustrative sense rather than a restrictive sense.

The invention claimed is:

1. A method comprising:

enabling, using at least one processor, a communication session between a first user and a second user of a communication system;

receiving, during the communication session, a request by the first user to share content with the second user;

searching one or more databases, remote from the first user and the second user, for content that is available for the first user to share with the second user;

generating, based on the results from the search for available content and further based on one or more previous content selections by the first user, a plurality of selectable options for sharing content, wherein each of the plurality of selectable options corresponds to an available piece of content;

enabling, during the communication session, presentation of the plurality of selectable options to the first user;

detecting a selection, by the first user, of a particular selectable option from the plurality of selectable options, wherein the particular selectable option is associated with a particular piece of content; and

sharing, in response to the detected selection, the particular piece of content with the second user.

2. The method of claim **1**, wherein the communication session is presented within a user interface.

3. The method of claim **2**, wherein enabling presentation of the plurality of selectable options to the first user comprises providing the plurality of selectable options within a second user interface in conjunction with the user interface.

4. The method of claim **3**, wherein the second user interface is a context window.

5. The method of claim **3**, wherein detecting the selection of the particular selectable option from the plurality of selectable options by the first user comprises detecting the selection of the particular selectable option from within the second user interface.

6. The method of claim **2**, further comprising embedding the particular piece of content within the user interface in response to detecting the selection of the particular selectable option from the plurality of selectable options.

7. The method of claim **6**, wherein sharing the particular piece of content with the user further comprises sharing the embedded particular piece of content with the second user.

8. The method of claim **2**, wherein the user interface comprises at least one of an instant message, a webpage, or an email.

9. The method of claim **1**, wherein the particular piece of content shared with the second user is one of a picture, a video, or an audio file.

10. The method of claim **1**, wherein sharing the particular piece of content comprises sending one of a link, an icon, or metadata.

11. The method of claim **1**, wherein detecting the selection further comprises automatically inserting the particular piece of content in the communication session.

12. The method of claim **1**, wherein sharing the particular piece of content comprises sending the particular piece of content to the second user.

13. The method of claim **1**, wherein sharing further comprises sharing the particular piece of content within a user interface area.

14. The method of claim **1**, wherein a sample of the particular piece of content is shared with the second user.

15. The method of claim **1**, wherein sharing the particular piece of content further comprises sharing the particular piece of content with a third user via the communication session.

16. A system comprising:

at least one processor; and

at least one non-transitory computer readable storage medium storing instructions thereon that, when executed by the at least one processor, cause the system to:

enable a communication session between a first user and a second user of a communication system;

receive, during the communication session, a request by the first user to share content with the second user;

search one or more databases, remote from the first user and the second user, for content that is available for the first user to share with the second user;

generate, based on the results from the search for available content and further based on one or more previous content selections by the first user, a plurality of selectable options for sharing content, wherein each of the plurality of selectable options corresponds to an available piece of content;

enable, during the communication session, presentation of the plurality of selectable options to the first user;

detect a selection, by the first user, of a particular selectable option from the plurality of selectable options, wherein the particular selectable option is associated with a particular piece of content; and

share, in response to the detected selection, the particular piece of content with the second user.

17. A non-transitory computer readable medium storing instructions thereon that, when executed by at least one processor, cause the at least one processor to perform the steps of:

enabling a communication session between a first user and a second user of a communication system;

receiving, during the communication session, a request by the first user to share content with the second user;

searching one or more databases, remote from the first user and the second user, for content that is available for the first user to share with the second user;

generating, based on the results from the search for available content and further based on one or more previous content selections by the first user, a plurality of selectable options for sharing content, wherein each of the plurality of selectable options corresponds to an available piece of content;

enabling, during the communication session, presentation of the plurality of selectable options to the first user;

detecting a selection, by the first user, of a particular selectable option from the plurality of selectable options,

wherein the particular selectable option is associated with a particular piece of content; and

sharing, in response to the detected selection, the particular piece of content with the second user.

18. The method of claim **1**, wherein the particular piece of content shared with the second user is a video.

19. The method of claim **1**, further comprising receiving, at a server device and from the first user, a search request and searching the one or more databases for content responsive to the search request.

20. The system of claim **16**, further comprising instructions that, when executed by the at least one processor, cause the system to receive, at a server device and from the first user, a search request, and search the one or more databases for content responsive to the search request.

21. The non-transitory computer readable medium of claim **17**, further comprising instructions that, when executed by the at least one processor, cause the at least one processor to receive, at a server device and from the first user, a search request, and search the one or more databases for content responsive to the search request.

22. The method of claim **1**, wherein sharing the particular piece of content with the second user comprises sending metadata associated with the particular piece of content to the second user.

23. The method of claim **1**, wherein sharing the particular piece of content with the second user further comprises providing access to a non-selected piece of content as a recommendation based on the detected selection of the particular piece of content.

24. The method of claim **1**, further comprising:

accessing a user profile associated with the first user; and

wherein generating the plurality of selectable options for sharing content is further based on the user profile.

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